Title: Win with the News

Brief Overview:

This activity invites students to participate in a newspaper contest. The skills involved are used to develop and assess functional life skills. Social studies, science**,** and language arts are integrated in this math based activity**.** Students explore math concepts by investigating the front page, sports, and weather sections of the newspaper.

Link to Standards:

- **Problem Solving** Students will formulate problems from everyday mathematical situations; acquire confidence in using mathematics meaningfully.
- **Communication** Students will relate physical materials, pictures, and diagrams to mathematical ideas; reflect on and clarifying their thinking about mathematical ideas and situations; relate their everyday language to mathematical language and symbols.
- **Reasoning** Students will draw logical conclusions about mathematics; use models, known facts, properties, and relationships to explain their thinking; justify their answers and solution processes; believe that mathematics makes sense.
- **Number Sense & Numeration** Students will construct number meanings through real-world experiences; develop number sense; understand our numeration system with place value concepts; interpret the multiple uses of numbers encountered in the real-world.
- **Whole Number Computation** Students will use a variety of mental computation and estimation techniques; use calculators in the appropriate computational situations.
- **Geometry & Spatial Sense** Students will recognize and appreciate geometry in their world.
- **Measurement** Students will understand the attributes of length, and temperature; make and use estimates of measurements; make and use measurements in problem and everyday situations.
- **Statistics & Probability** Students will collect, organize, and describe data; construct read and interpret displays of data; formulate and solve problems that involve collecting and analyzing data.
- **Fractions & Decimals** Students will identify fractions and decimals in real-world applications**.**

Grade/Level:

Grades 2-4

Duration/Length:

This activity will take approximately three 50 minute-class sessions.

Prerequisite Knowledge:

Students should have working knowledge of the following skills:

- Basic grade level computation skills
- Basic grade level reading skills
- Map reading skills
- Familiarity with the layout of a newspaper

Objectives:

Students will:

- estimate and use place value.
- recognize fractions, decimals, and percentages.
- construct tables and graphs.
- work cooperatively in groups.
- collect and organize data from resources.
- supply personal data, i.e., birth date, address, and telephone number.
- measure and record to the nearest centimeter (cm) and inch (in) with a ruler.
- record data in a table using tally marks and discuss.

Materials/Resources/Printed Materials:

- USA Today or local newspaper
- Pencils
- Calculator
- Student packet
- Centimeter/Inch ruler
- Chart paper or chalkboard

Development/Procedures:

Day 1: "Front Page"

The students will be invited to enter a contest sponsored by "Nation Today" newspaper. Students are challenged to find a variety of ways that numbers are used in daily life. They will work in cooperative learning groups to estimate, measure, create tables. They will be asked to support their answers in writing.

- Read the letter (Appendix page 1) aloud with students.
- Each student will independently complete entry form.
- Students will complete the Number Scavenger Hunt (Appendix page 2) in cooperative groups.
- Students will identify, measure, and label the longest horizontal and longest vertical line on the front page.
- Students will measure and mark column and follow directions (Appendix page 3) to create table.

Day 2: "Sports Page"

The sports page will be used to generate predictions, comparisons, computations, and graphs.

- Ask students to brainstorm sports teams that are playing in the current season that may be reported in the newspaper. Record responses.
- Have students predict which sports may generate the greatest/ least total score.
- Students will search the sports page to check predictions. Results will be recorded. (Appendix page 4).
- Students construct a graph to show the top five teams in the sport of their choice.

Day 3: "Weather Page"

Using the weather map students will locate different cities, calculate the differences between divergent temperatures, interpret the color legend to identify temperature gradients, estimate distance, and create and identify geometric figures**.**

- Students will complete temperature comparison activities (Appendix page 5).
- The students will interpret data using the legend (Appendix page 5).
- Students will explore form and identify different geometric shapes by connecting cities on the U.S. weather map.
- Students will choose a city that they would like to visit. They will estimate the distance from their home city. Students will compare temperatures between these two cities.

Performance Assessment:

Evaluation: The teacher will read the student responses to each section and score each day's activities using the rubric provided.

Rubrics

Day 1- "Front Page"

High Response- The student worked cooperatively with the team in all activities. The student accurately completed each section of the entry form. The student successfully identified most of the numbers in the scavenger hunt. The student found , measured, and used centimeters or inches to label the longest horizontal and vertical lines. The student made a reasonable prediction of the number of words in the one inch column and completed a table using tally marks for the frequency of each vowel. The student formulated a hypothesis justifying the data collection.

Medium Response- The student worked cooperatively with the team most of the time. The student was accurate with one or two omissions on the entry form. The student successfully identified over half of the numbers. The student accurately measured but failed to identify the unit of measure or he/she accurately measured and labeled only one line. The student made an unreasonable prediction or made an accurate prediction and collection of data but failed to use tally marks correctly.

Low Response- The student cooperated some of the time. The student was inaccurate and or did not complete the entry form. The student identified a few of the scavenger hunt items. The student did not accurately measure and/or label the horizontal and vertical lines. The student failed to follow directions to make a prediction or form a table.

Day Two- " Sports Page"

High Response- The student worked cooperatively in all activities. The student participated fully in all class discussion.The student successfully, collected, recorded, and organized accurate data onto a graph.

Medium Response- The student worked cooperatively and participated in class discussion most of the time. The student was mostly successful at collecting, recording, and organizing data onto a graph with few mistakes.

Low Response- The student cooperated some of the time. The student did not collect accurate data and/ or did not organize the data onto a graph.

Day 3- "Weather Page"

High Response- Students successfully and accurately completed temperature comparison activities. The student accurately listed three types of data from the color weather legend. Student accurately completed and identified three geometric shapes. The student successfully estimated distance on a map.

Medium Response- The student successfully completed temperature activities with one or two errors. The student accurately listed two types of data from the color weather legend. The student accurately completed and/or identified two geometric shapes. The student made a reasonable guess about the distance between two cities.

Low Response- The student did not complete the temperature comparison activity and/or had more than two errors. The student listed fewer than two pieces of data from the color weather legend. The student completed and identified fewer than two geometric figures. The student did not make a reasonable guess about the distance between two cities.

Extension/Follow Up:

- Classmates can generate discussions relating to other sections of the newspaper, and how math relates to the world, community, and home.

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WIN WITH THE NEWS !!

Dear U.S. Student,

How would you like to win a free trip to any city in the United States? Here's how...

Math is everywhere!! Our challenge to you is to find the many ways math is used in the newspaper. To qualify for this contest you must fill out the entry form below, and complete the newspaper math challenges your teacher will provide.

Good luck! We hope to hear from YOU soon!!

Yours Truly,
Seymour Nooze
Seymour Nooze
Editor-in-Chief
Nations News

_____ ___/____/____
Name: First Middle Last Date

_____
Address: Street

_____ _____ _____
City State Zip Code

(___)_____ _____ ___/____/____
Phone Number Age Birth date

NUMBER SCAVENGER HUNT

Here's your first challenge. Using just the front page, see how many of the following real-life numbers you can find.

1. Decimal _____
2. Percent _____
3. Number >100 _____
4. A Time _____
5. A Date _____
6. A Population _____
7. An Age _____
8. A Number > 100,000 _____
9. A Number with a five in the 10's place _____
10. An Even Number< 1,000 _____
11. A Fraction _____
12. A Telephone Number _____
13. A Price<$1.00 _____
14. A Price>$1.00 _____
15. A Page Number _____
16. Measure the length of the longest vertical line.

_____

17. Measure the length of the longest horizontal line.

_____

18. Find the length of the height of the page. _____
19. Find the width of the page. _____
20. Find the area of the page. _____

Now, you need to choose a column of print, and measure one inch down from the top and draw a line across so that you have a block of print. It doesn't matter if it is not a complete paragraph.

Next, predict how many words are in that section._____
(Words)

Then count the actual number of words._____

Predict which vowel you think will occur most often. _____
Why? _____

_____

Create a table to record the number of each vowel, including "y". Use tally marks.

Vowel Tally

Compare your results with another team. Did you get similar results? _____ If you were to do this again in a different section do you think you would get the same results? Explain your reasoning. _____

_____

_____

SPORT SCORE SEARCH

Using the sports page of the newspaper, find the sport that has the **greatest** combined score.

Sport_____

_____	+	_____	=	_____
team 1	+	team 2	=	total combined score

Now, find the sport that has the **least** combined score.

Sport_____

_____	+	_____	=	_____
team 1	+	team 2	=	total combined score

If you were to do this activity tomorrow do you think that the same sport would have the greatest combined score? Why or why not?_____

_____

_____

If you were to do this activity tomorrow do you think that the same sport would have the least combined score? Why or why not?___

_____

_____

_____

Choose a different sport reported in this section. In the space below create a graph that represents the top five teams. You may chose a bar graph or a pictograph.

Weather Watch

Use today's weather map to answer the following questions.

Which city on this map has the greatest temperature?

_____

Which city on this map has the lowest temperature?

_____

Which city on the Atlantic Seaboard has a sum closest to 100 when you combine the low and high temperatures?

_____

Which city on the Pacific Seaboard has a difference closest to 0 when you subtract the low temperature from the high temperature?

_____

The map is presented in varying colors. Using the temperature legend what three things can you tell about the weather in the U.S. today?

_____

_____

_____

_____

_____

_____

_____

_____

_____

Next connect the dots between cities to make three closed geometric shapes. Record the cities that you connected and the shape that they formed.

_____

_____

_____

_____

_____

If you win this contest which U.S. city do you wish to visit?

_____

The U.S. is approximately 3,000 miles from the east coast to the west coast. Estimate how many miles you think it is from your home city to the city you want to visit.

_____

_____

Compare the high temperature of your home city with the high temperature of the city you wish to visit. Calculate and record the difference.

_____

_____

Congratulations! Your entry is now complete! Please turn in all contest activities to your teacher.